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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/625,493	07/25/2000	Morio Gaku	2000-1033A	6721

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EXAMINER

PIERCE, JEREMY R

ART UNIT PAPER NUMBER

1771

10

DATE MAILED: 03/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/625,493

Applicant(s)

GAKU ET AL.

Examiner

Jeremy R. Pierce

Art Unit

1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Response to Amendment*

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Kimbara et al. (U.S. Patent No. 6,362,436).

The applied reference has a common inventor and assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Kimbara et al. disclose a copper-clad laminate where the glass fabric base material has a thickness of 50 microns, a weight of 35 to 60 g/m<sup>2</sup>, and a gas permeability of 5 to 25 cm<sup>3</sup>/cm<sup>2</sup>/sec (column 2, lines 54-59). With regard to claim 2, inorganic filler may be present in the amount of 10 to 80% by weight of the resin (column 10, lines 28-29). With regard to claim 3, the glass content of the prepreg is within the claimed range (see Example 1). With regard to claim 4, the total thickness is also within the claimed range (see Example 1). With regard to claim 5, the resin composition contains a polyfunctional cyanate ester (column 5, lines 27-42).

4. Claims 1-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Kimbara et al. (U.S. Patent No. 6,479,760).

The applied reference has a common inventor and assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

The '760 patent discloses Applicant's invention in claims 1-7.

#### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishii et al. (U.S. Patent No. 5,368,921) in view of Touzaki (JP 11-77892, with an English translation provided).

Ishii et al. provide a metal foil-clad laminate obtained by lamination molding a resin-impregnated substrate and a metal foil (column 2, lines 22-24). The substrate can be a woven glass fabric with a preferred thickness of 0.05 to 0.2 millimeters (column 2, lines 57-66). Ishii et al. do not specifically provide a weight for the woven glass fabric. However, the weight range of 15 to 165 g/m<sup>2</sup> cited by the Applicant is very common in the art of printed circuit substrates, and most likely inherent to the material disclosed by Ishii et al. Alternatively, it would have been obvious to one skilled in the art to use a woven glass material with a basis weight between 15 and 165 g/m<sup>2</sup> in order to gain the properties that are optimal in a printed circuit board, such as being lightweight and rigid. Ishii et al. also do not specifically mention the gas permeability of the glass fabric. Touzaki teaches the permeability of glass fabrics for making a copper-clad laminate is preferably 1-15 cc/cm<sup>2</sup>/sec to obtain a laminate where air bubbles aren't present and the resin constituent sufficiently sinks into the glass fabric (Paragraph 10). It would have been obvious to one having ordinary skill in the art to use a glass fabric with a permeability between 1-15 cc/cm<sup>2</sup>/sec in the laminate of Ishii et al. in order to have the resin sufficiently sink into the prepreg without forming air bubbles, as taught by Touzaki. With regard to claim 2, Ishii et al. teach the thermosetting resin is blended with inorganic

filler in the amount of from 10 to 45% by weight of based on the total amount of the resin solid or from 5 to 30% by weight of the substrate (column 4, lines 6-19). With regard to claim 3, Ishii et al. disclose the prepreg to have 55% weight of resin solid and inorganic filler in his examples (column 5, line 7). Therefore, the glass content of the prepreg must be 45% by weight, which falls within the Applicant's claimed range of 25 to 70% by weight. With regard to claim 4, with the disclosed substrate thickness of 0.05 to 0.2 millimeters disclosed (column 2, lines 57-66), the thickness of the copper-clad laminate would inherently fall into the Applicant's claimed range of 0.03 to 0.15 millimeter upon typical impregnation of the resin and when typical copper foil is clad on the outside of it. With regard to claim 5, Ishii et al. disclose using a cyanate ester resin as the thermosetting resin used to impregnate the substrate (column 3, lines 16-18).

### ***Double Patenting***

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 1-5 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-7 of U.S. Patent No. 6,479,760. Although the conflicting claims are not identical, they are not patentably distinct from each other because all the limitations set forth in the present claims can be found in claims 1-7 of the '760 reference, including the properties of the glass fabric and the types of thermosetting resin to be used.

Claims 1-5 are directed to an invention not patentably distinct from claims 1-7 of commonly assigned U.S. Patent No. 6,479,760. Specifically, the properties of the glass fabric and the types of thermosetting resin to be used are found in claims 1-7 of the '760 patent.

#### ***Response to Arguments***

9. Applicant's arguments with respect to claims 1-5 have been considered but are moot in view of the new ground(s) of rejection.

**Conclusion**

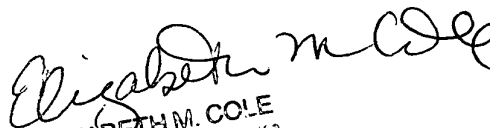
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy R. Pierce whose telephone number is (703) 605-4243. The examiner can normally be reached on Monday-Thursday 7-4:30 and alternate Fridays 7-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (703) 308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Jeremy R. Pierce  
Examiner  
Art Unit 1771  
March 25, 2003

  
ELIZABETH M. COLE  
PRIMARY EXAMINER